

Karan Acoustics Master Collection POWERa Mono power amplifiers

by Alan Sircom

Milan Karan's Master Collection portfolio of preamplifiers and power amplifiers is a step-change in the company's design, leveraging decades of knowing how to make a good amplifier into producing the best possible product in the category. The first two out of the starting gates were the two box LINEa (reviewed in Issue 181) and single box LINEb (reviewed in Issue 191) preamplifiers, with the promise of stereo and mono power amplifiers and phono stages to follow. The Master Collection POWERa Mono amp is the first

of this second wave of new electronics from the brand, and it more than lives up to the standards set by the preamps.

Oddly, although they are no strangers to the magazine, we have never formally looked at any of Karan Acoustics 'big' stereo or mono power amplifiers. With the exception of the 'smaller' KA M 650 monoblocks (reviewed in Issue 56), we only ever used them in the context of other reviews. It's time to redress this error.

Both stereo and mono variants of the POWERa were launched only a few months ago and the big monoblocks were



► a natural choice for the very first review. Leading the Karan range for almost two decades, the KA M 1200s and, lately KA M 2000s mono amplifiers defined a standard of design and sonic performance that was never going to be easy to beat and outperform. So, to do so, Milan Karan has pulled out all the stops when designing the POWERa amplifiers.

Everything inside the impressive true differential mono chassis shell has been not just improved, but redesigned from the ground up. While the output (power) circuits still implement the very best Sanken bipolar output devices, the power supplies and their accompanying audio infrastructure have been extensively reworked. The same applies to the input (driver) stages with both high-grade Audyn and superior, proprietary Karan Acoustics capacitors being used throughout. The component list of greats also includes Vishay and Roederstein resistors as well as Cardas Audio's highest quality chassis wire. That, however, is not all. As with all Karan mono amplifiers, each 'polarity half' of each audio channel (ie. amplifier) has its own independent mains transformer and accompanying power supply. Which also means we need two mains cables for each amplifier!

For the POWERa amplifiers, totally new, much bigger, more powerful and mechanically quieter toroidal transformers were developed. That resulted in a proportionally enlarged battery of power supply reservoir capacitors of equally high-grade specifications, giving the circuits an even greater reserve of power and current always and ultra-quickly available from stock. As before, speaker terminals and RCA inputs stem from WBT, while Neutrik caters for the XLR input interface.

This amplifier's power output is impressive even by the brute-force standards of some of the biggest of big hitters. It puts out an impressive 2,150W into eight ohms and pulling up to 6kW into two ohms... you can see why it needs two power cables per chassis. In use that doesn't just mean it can make a wall sing if you give it some speaker terminals; it means the amps will deliver the signal's full bandwidth and dynamic headroom into any loudspeaker load, while delivering the potential for excellent transient speed and extremely silent circuit operation.

The innards of the new Master Collection power amplifiers hide another new feature; in the main chassis of all POWER models is an advanced mains (line) conditioner with the primary goal of dealing with and eliminating as much (if not all) of the unwanted DC related by-products of our electricity supply! The amplifier has a switch on the back panel allowing you to hear the sound with or without the conditioner/DC filter in use or not. You can even do this while the amplifier is switched on and playing music! While there are few parts of audio quite as contended as the line conditioner/DC filter market, I'd like to see this offered as a separate, universal product within the Karan Acoustics product range.

When asked about this part of the design, Milan Karan said, "I believe that having our own design and solution for treatment of unwanted DC artifacts from the mains supply, is at least as important as all other circuit innovations within the Master Collection POWER amplifiers. What would be the point of having huge and capable mains transformers and other power components (which often contribute to the ultimate ►



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- ▶ sound of any amplifier than the actual audio circuits) if the electricity entering the amplifier were not to be of the same, high standard?

“To make something complex sound as simple as possible, let us say that any supply of electricity also includes various ‘unwanted’ elements. Let’s just consider how many domestic electrical appliances and/or consumers tend to be powered through the electricity supply network at all times. They generate a huge number of spurious by-products as a consequence of how poorly their own power supplies may have been designed. And, for as long as they remain powered up, those ‘dirty’ components are fed back into the network and, consequently, into all other consumers, equally so switched on! Not just high-end audio components, everything! The most parasitic pollution is of a DC (direct current) nature. This, quite damaging for audio components in particular, part of our electricity, reflects itself as a DC voltage that can be

either positive or negative, and has an amplitude of up to several Volts! The higher this DC voltage may be, the more saturation attacks mains transformer cores within all amplifiers. Temperature of the transformer windings will rise because they feel the DC voltage almost as a short (circuit)! Transformers will begin to vibrate mechanically to a various, often high degree. We perceive this as an unpleasant mechanical vibration, like a buzz, from the amplifiers within one’s listening room. The bigger the mains transformers, the more sensitive to the parasitic DC voltage they are and the louder the mechanical vibrations will be. That is not all, however. This also brings a problem with the Neutral side of the mains as a phase shift will develop, the severity of which depends on how badly high the parasitic DC voltage may be. This, ultimately, prevents the sine wave to be correctly and perfectly shaped. Negative effects on the operational performance of an amplifier and overall sound quality because of these mains anomalies are substantial! ▶

► “In order to protect an amplifier of such a (high) power output as in Master Collection POWER models, designing a suitable line conditioner with an efficient DC ‘eliminator’ was anything but easy. The main criterion was that the device had no negative influence on the inherent sound of the amplifier. Further, it had to be the very generously specified in terms of current and voltage flow from the mains supply, so it would cater for at least three times more than the maximum required. In real life that meant a rating of 60A or more. We are proud our mains (line) conditioners inside the new POWER amplifiers comfortably meet and exceed those and many other criteria. Plus, the additional bonus of an on/off switch function enabling the user to perform direct comparison of its effects at any time while the amplifier is in active use.”

I’ve spoken to a few amp designers about power conditioning before, but it’s rare to get such a succinct and impassioned response, so I included it verbatim. It’s clear this is a key function of the Master Reference concept, as is the clever, elegant chassis.

The new chassis concept is a highly effective circuit resonance damping system too. Increasing the mass is the most obvious solution towards superior overall damping, but the problem then becomes lots of the wrong kind of metal can cause more harm than good, and using just a giant lump of aluminium to mass-load the amplifier ends up being a source of resonance in its own right. To counter both concerns, Karan Acoustics designed the main chassis as single piece unibody made out of a solid CNC-machined piece of very high grade aluminium. This acts as a heatsink for the output devices, while creating a very non-resonant environment for the entire amplifier. This also helps to lower the noise floor of the amplifier itself. Continuing down the ‘impressive specifications’ line, all 105kgs of weight (per amplifier) are supported on three Critical Mass Systems CS² 1.5 supporting feet, and the amplifiers are shipped in proper wooden crates which bring the total shipping weight to 130kg per amplifier. Put another way, each one weighs more than a professional rugby player!

A good, big amplifier needs to do several things well; it needs to be essentially effortless in performance, with the power and headroom to express the preamplifier’s demands to the loudspeakers without getting in the way at all, but that’s a given. What it also needs to do is have a significant sense of

scale and speed, so it doesn’t just sound like a big amplifier all the time. When you get to the very top tier of power amplifiers, that should be a given too. But often isn’t.

However, what you get with the Karan is so much more. It’s a scintillating performance, showing you not only what the devices up-stream and down are capable of, but also pointing out just where other amplifiers get it so very wrong. This is the antidote to those amplifiers that push sound at you; initially impressive but ultimately wearing. Normally, that ‘doesn’t push music at you’ is code for ‘it sounds dull and dreary’ but in this case the treble sparkles and the midrange is clear and quicksilver fast. The more time you spend with the top end amplifiers, the more you realise there is normally some sort of trade-off, even with the best of them. Some are faster at the expense of dynamics, some vice versa. Some do detail and stellar high-frequency reproduction at the expense of making the sound too ‘in yer face’ exuberant and exciting. However, it’s only when you happen upon an amplifier that doesn’t make those compromises do you discover just how common they are, and the Karan Master Reference POWERa Mono amps are the amps that don’t compromise.

How this comes across is simple. Play a piece of music. It doesn’t matter what that piece of music is, just something you know well. For me, it was ‘Entr’acte’ from *Orange* by Carolune Shaw and the Attacca Quartet [Nonesuch]. Other amplifiers will play you all the details in the string noises and the rest. Some will tease out the rhythmic or dynamic elements of this recording or maybe show its pace and speed. Eventually, they will begin to push past that initial ‘signature’ and show the recording in its complete form. The Karan amps give you the whole picture right from the opening bar. This could be unnerving, but in fact is thrilling. It’s like hearing the recording for the first time or much more like hearing it live. It’s like the first time you heard good audio and it revised the way you appreciated recorded music. It’s that good.

All those usual aspects of performance are moved out of the way. You realise that discussing stereo soundstaging or vocal articulation is praising a product for not doing its job properly, because when you hear it done right through the Karans, those terms just fall away. All that’s left is music. Sure, if you play Trentemøller’s ‘Chameleon’ [*The Last Resort*, Poker Flat] or Boris Blank’s ‘Electrified’ from the album of ►

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- ▶ the same name [Polydor], the POWERa's ability to grab hold of the bass and shake it out through your internal organs is deeply impressive. And it makes your loudspeakers sound and seem bigger when called upon in that manner. But that's only the start of what this is all about. Bass that treats your body to a spot of food processing is an easy thing to do; listening into those synthesised pieces of music and finding the subtlety and instrumentation hidden below – and having that musical epiphany presented instantly – is something rare and to be treasured.

I touched on this earlier, but where good audio is a time machine, putting you back to the point when you first heard that album, really, really good audio takes you back to the first time you heard what hi-fi can do. The trouble with that experience is it is fleeting, and many of us spend a fortune trying to replicate and hold onto that feeling we got the first time we heard good audio. Addiction specialists might talk about ‘reward centres’ in the brain and how that kind of fleeting ‘high’ creates a need in the addict, but with audio, the POWERa Mono resets your musical and audio levels each time you play a track; you get that ‘first time I heard it’ feeling over and over again.

Then there's the scale issue. Sounds played through the POWERa Mono are ‘right sized’ whatever you play. Move from a large orchestral piece to something more small scale and vocal and the Karan amps move with you effortlessly. Once again, this is something you realise more by recalling other amplifiers that do almost the same thing. This scales perfectly well, with no sign of either ‘tiny orchestra syndrome’ or ‘Attack of the 50ft Woman’ problems and to do that so thoroughly is exceptionally rare.

To try to sum up the Karan Acoustics Master Collection POWERa Mono in musical terms, I need ‘Spitfire’ from Public Service Broadcasting's *Inform Educate Entertain* album [Test Card]. It's not a demonstration quality track; just a pounding rhythm coupled to some noisy samples from the 1942 British movie, *The First Of The Few*. It's easy to get it wholly wrong on a big system, but get it right and I'm back building Airfix kits, and this got it so right, I could smell Humbrol enamel!

The only downside to these amplifiers is that they spell the end for Karan's existing KA M line of power amps. While these big power amps are not in the same sonic league as

TECHNICAL SPECIFICATIONS

Type: Mono solid-state power amplifiers
 Power output: 2.1kW into 8Ω, 3.6kW into 4Ω, 6kW into 2Ω
 Peak power output: 2.4kW at 8Ω
 Inputs: 1 balanced (XLR) and 1 unbalanced (RCA)
 Input impedance: 30kΩ (balanced/unbalanced)
 Input sensitivity: 2.0V/RMS (for max output)
 Frequency Response: 20Hz-20kHz ±0dB, DC-300kHz, -3dB
 Gain: +36dB
 Distortion THD/IMD: 0.03%
 Signal to noise ratio: >120dB unweighted
 Dimensions (W×H×D): 50.4 × 29.2 × 60.3cm per amplifier
 Weight: 105kg per amplifier
 Price: £79,995 per pair

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the Master Collection models, they are (somewhat) more affordable. I doubt something like the KA M 2000 would be a stepping stone to the POWERa Mono (and there will likely be a POWERb line that would likely make such jumps even harder to justify). Nevertheless, it would be nice to have something more attainably-priced in the Karan portfolio just to make the Master Collection all the more of a goal for some.

That's nit-picking, however, as the Master Collection POWERa Mono is the best balance of performance in terms of sheer power output and the quality of that power that you can get right now in my opinion. This is an amplifier with endless scale and dynamic range, yet doesn't shout about those properties... simply letting you know they are there when you need them. An amplifier that is at once capable of brute force and great refinement is what sets the Karans apart from the pack.

There are some exceptional amplifiers on the market at the top end, and there's a strong argument to say there's one no one path up that mountain (the long-winded version of YMMV: ‘Your Mileage May Vary’). But there is a personal path up that mountain and for me, that means the Karan Acoustics Master Collection POWERa mono power amplifiers. They are the best amplifiers I have heard so far. +